

CLAIMS

1. A method of controlling a connection comprising a first link and a second link, said method comprising the steps of:

determining if a first link or a second link of a plurality of links is limiting capacity of said connection; and

changing at least one parameter relating to at least one of said first and said second links to change the capacity of said first link or said second link if said at least one of said first and said second links is limiting capacity of the connection.

2. A method as claimed in claim 1, wherein the changing step comprises changing the at least one parameter relating to said at least one of said first and said second links to increase the capacity of said first link or said second link.

3. A method as claimed in claim 1, wherein the changing step comprises changing the at least one parameter relating to another of said first and said second links to improve quality of said connection.

4. A method as claimed in claim 1, wherein said changing step comprises changing the at least one parameter that comprises at least one of

bit rate,
error rate,
block error rate, bit error rate,
activity factor at an interface with the at least one said first link or said second link, and
scheduling of users with a given bit rate.

5. A method as claimed in claim 4, wherein said changing step comprises decreasing said bit rate.

6. A method as claimed in claim 4, wherein the changing step comprises increasing the error rate if said first link is limiting capacity.

7. A method as claimed in claim 4, wherein the changing step comprises decreasing the error rate if the second link is limiting said bit rate.

8. A method as claimed in claim 4, wherein the changing step comprises using a higher activity factor at an interface with said second link if said first link is limiting capacity.

9. A method as claimed in claim 4, wherein the changing step comprises using a lower activity factor at an interface with said second link if said second link is limiting capacity.

10. A method as claimed in claim 4, wherein the changing step comprises scheduling increased capacity to users with a relatively low power per bit if said first link is limiting capacity.

11. A method as claimed in claim 4, wherein the changing step comprises scheduling increased capacity to users with a relatively high power per bit if said second link is limiting capacity.

12. A method as claimed in claim 4, wherein said changing step comprises using fair throughput

scheduling if the first link is limiting capacity.

13. A method as claimed in claim 4, wherein said changing step comprises using fair resource scheduling if said second link is limiting capacity.

14. A method as claimed in claim 4, wherein said changing step comprises changing the at least one parameter which has at least one limiting value.

15. A method as claimed in claim 14, wherein said changing step comprises changing the at least one parameter, and wherein said limiting value is one of an absolute value and amount of change in said at least one parameter.

16. A method as claimed in claim 1, wherein said determining step comprises determining said first link comprises a radio link.

17. A method as claimed in claim 1, wherein said determining step comprises determining said second link comprises a transport link.

18. A method of controlling a connection comprising a first link and a second link, said method comprising the steps of:
determining if a first link or a second link is limiting capacity of said connection; and

changing at least one parameter relating to at least one of said first and said second links whereby the other of said first and said second links is used to improve the quality of said connection if said one of said first and said second links is limiting capacity.

19. A method of selecting a bit rate for a connection comprising a first link and a second link, said method comprising the steps of:

determining if resources are available in a first link and a second link for a given bit rate;

selecting a bit rate from a plurality of bit rates for which it is determined in said determining step that resources are available in both said first and said second links; and

using said selected bit rate in said connection.

20. A method as claimed in claim 19, wherein said determining step comprises performing said determining initially with a minimum bit rate with each successive determining step using a higher bit rate.

21. A method as claimed in claim 19, wherein said determining step comprises performing said determining step initially with a maximum bit rate with each successive determining step using a lower bit rate.

22. A method as claimed in claim 20, wherein said determining step comprises performing said determining step until the bit rate is selected for which resources are available in both said first and said second links.

23. A method as claimed of claim 19, wherein said selecting step comprises selecting the highest bit rate for which resources are available in both said first and said second links.

24. A method as claimed in claim 19, wherein said determining step comprises determining for said first link if sufficient code or power or hardware or baseband

resources are available.

25. A method as claimed in claim 19, wherein said using step comprises using said selected bit rate in said connection, said connection comprising one of a new connection and an established connection.

26. A method as claimed in claim 19, further comprising providing a plurality of connections which comprises said first link and said second link.

27. A method as claimed in claim 26, wherein said determining and selecting steps comprise determining and selecting for at least two of said plurality of connections.

28. A method as claimed in claim 26, wherein said determining step for said second link comprises summing the bit rates for said plurality of connections.

29. A method of changing a bit rate for one of a plurality of connections comprising a first link and a second link, said method comprising the steps of:

- selecting a new bit rate for a connection of a plurality of connections;

- determining if resources are available in both said first and second links for said new bit rate;

- and selecting said new bit rate for said connection if the resources are available.

30. A controller for controlling a connection comprising a first link and a second link, said controller comprising:

- means for determining if said first link or said second link is limiting capacity of said connection; and

means for causing at least one parameter relating to at least one of said first and said second links to be changed, thereby changing the capacity of said at least one of said first and said second links, if said first link or said second link is limiting capacity in the connection.

31. A controller for controlling a connection comprising a first link and a second link, said controller comprising:

means for determining if a first link or a second link is limiting capacity of said connection; and

means for causing at least one parameter relating to at least one of said first and said second links to be changed if said first link or said second link is changing capacity whereby another of said first and second links is used to improve the quality of said connection.

32. A controller for selecting a bit rate for a connection comprising a first link and a second link, said controller comprising:

determining means for determining for a plurality of bit rates if resources are available in both said first and second links for a given bit rate; and

selecting means for selecting a bit rate for which it is determined in said determining step that the resources are available in both said first and second links.

33. A controller for changing a bit rate for one connection of a plurality of connections comprising a first link and a second link, said controller comprising:

means for selecting a new bit rate for said one connection; and

means for determining if resources are available in both said first and second links for said new bit rate; and

means for selecting said new bit rate for said connection if said resources are available.

34. A controller as claimed in claim 30, wherein said controller comprises software, said software providing one or more of the following:

means for determining, means for selecting, and means for causing.

35. A controller as claimed in claim 30, wherein said controller is provided in a radio network controller.

36. A system comprising:

a first entity;

a second entity;

a third entity, wherein a connection is establishable between said first, second and third entities with a first link provided between the first entity and the second entity and a second link provided between said second entity and said third entity; and

a controller for controlling the connection comprising the first link and the second link, the controller including

means for determining if said first link or said second link is limiting capacity of said connection; and

changing at least one parameter for relating to at least one of said first and said second links to change the capacity of said first link or said second link if the one of said first and said second links is limiting capacity in the connection.

37. A computer program product comprising software code

portions, the software code portions, when executed, control a connection having a first link and a second link, the software code portions to effect the steps comprising:

determining if a first link or a second link is limiting capacity of said connection; and

changing at least one parameter relating to at least one of said first and said second links to change capacity of said first link or said second link if the one of said first and said second links is limiting capacity in the connection.